

USE THIS IN THE BOOK

AS AN

# ➤ INDEX SHEET ➤

To divide off the work  
in different studies

— OR —

AS A

# FILING COVER

To bind, with the fasteners,  
all work worth keeping for review.

For use in the ➤

## National Notebook

Patented by E. W. Hill, July 5, 1898.

SUBJECT OF STUDY:

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To index the book, write below on the margin, the name of the study



Butter

27

26

27

26

♂ ripe

25

♀ laid.

Have up 4.20 Am. July 19  
light S.E. breeze - fog.

Sta 10340

5.30 Am

28 fath, <sup>to</sup> 6.30 Am  
calm sea heavy. light S.

50 m.

0 53.5

WS

25 6.7 @ 18 R 149

50 5.4 @ 16 R 153

20 net 0 sparse

1/2 m " 0 F Eggs + Cal.

1 m net 30-0 Rich cal, 4 F. sag.  
3 large 'ambion

1/2 m quant. 45-0 rich cal.

3 miles S by E from Eastern Pt.

$$\begin{array}{r}
 48 \\
 18 \\
 \hline
 344 \\
 48 \\
 \hline
 8.24
 \end{array}$$

48 park

$$\begin{array}{r}
 55 \overline{) 480} \quad (.87) \\
 \underline{440} \\
 40
 \end{array}$$

Sta 10341 July 19 9.15 AM  
 Light. 10.50 AM  
 S S W. calm clear.  
 48 fath.

83 m.

42° 48' 30"  
 70° 27' 30"

0		61.5	WS
25	148	5.35 @ 17.5	WS
50	149	4.15 @ 16.5	WS
80	153	3.9 @ N.5	WS lost.

1/2 m net quant 80-0 m Rich cal +  
 20 net surface 1/2 hr. rich micro  
 1/2 m " 1/2 hr. very scant  
 Bottom net 83-0 1/2 hr. very rich  
 cal + 4f + sag  
 Meter net 30-0 20 min.  
 Rich Cal + 4f.

over

Sorted Bottom net haul,  
about 3 qt (solid)  $\frac{1}{2}$  cal  $\frac{1}{2}$  sagittae,  
with a few shrimp & many  
y.f. Saw no eggs. preserved  
fishes &  $\frac{1}{3}$  of the rest

$$\begin{array}{r} 1.83 \\ 33 \\ \hline 549 \\ 549 \\ \hline 60.39 \end{array}$$

Sta 10342 July 19.

fresh S. breeze, clear, smooth sea.

1.30 P.m. 2.20 P.m.

33 fath = 60 m.

Race Pt St Sk E  $\frac{1}{4}$  E 4  $\frac{1}{2}$  miles

0	63		WS
30	#149	7.95 @ 19	W.S.
60	#148	6.40 @ 18	WS.

20 net surf	$\frac{1}{2}$ hr	fair micro.
$\frac{1}{2}$ m. "	"	Rich fish eggs
$\frac{1}{2}$ m net quant 55-0		<u>Rich</u> cal + 4-f.
Bottom net	$\frac{1}{2}$ hr	Rich cal, seq + 4 f.

Did not use meter net on acct  
excess Calanus, & bottom net  
gave good sample



10343 July 20

Provincetown Mass.

See Log - Tows only.

---

July 21 Sternbound at  
Provincetown.

65 fishing vessels in  
for refuge - mostly  
seiners - 62 seals, the  
rest power

July 22

Cloudy, fresh S breeze  
Under way 5.30 A.M.  
Surface temp in hr.  $66^{\circ}$

At Race Pt ran into fog,  
with light S.W. breeze

mm m, www

- : - mm

mm  
mm  
mm

13.15

14.6

8/

Sta 10344

Off Highland light.

July 22. 9.15 A to 10.45 AM

Windy, smooth sea, light SW breeze.

Position 6 miles ~~SW by~~ NE by E H.S.

Depth, 48 fath - 88 m.

0		60.5	W S.
25	149	5.2 @ 20	W S.
50	148	4.4 @ 20	W S.
80	153	4.5 @ 20	W S.

$\frac{1}{4}$  m. water 80-0. Very rich net up.

$\frac{1}{4}$  m.  $\odot$   $\frac{1}{2}$  hr Rich eggs, few crabs.

20 net  $\odot$   $\frac{1}{2}$  hr Rich crabs & eggs.

water net 40-0. 15 min. Stomach

Bottom net Bot 0 20 min. ~~4 ft 1 ft~~  
Sigs 4 ft - found.

$$\begin{array}{r} 1463 \\ 3.6 \\ \hline 150 \end{array}$$

5th 1924

July 22 2.15 PM 4.30 PM

Black fog 324 Baya South Sea

82 fath

150 meters

0	50	100
<del>50</del> 1.157		
50 R.149	4.44 @ 13.5	10 S
100 148	4.05 @ 13	45.
150 153	4.23 @ 13	41.

3.50

1/2 m out. 1500 fair cal.

20 m out 0

1/2 m out 0

meter out 100-0

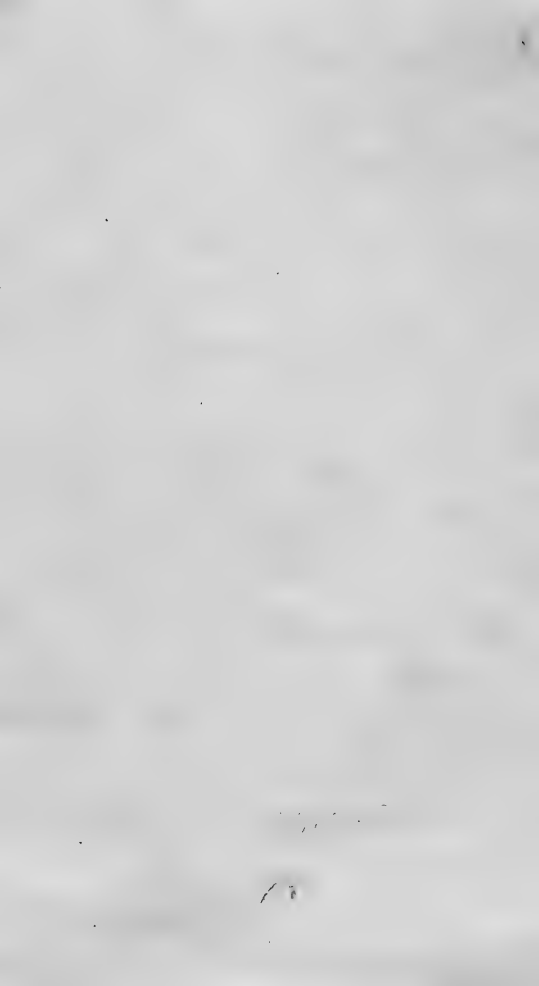
1/2 m Rich. cal.

" Rich. cal.

" Total 2 1/2

6 PM

Surf 52



10346 July 22 10.15 PM.  
Fog. SW. 11.30 PM.  
Rain.

br sand + shells

34 fath = 62 m.  
41°27' 69°22'

0 40' = 7.22 W.S.

30 148 6.5 @ 10

60 153 7.6 @ 11

Quanta net 62 - 0 hit bottom

20 net 0 20' 20' rich cal + some m...

1/2 m. 0 Rich cal?

1 m. 30-0 m 20' Rich cal?

Rich cal? or young?

Large Str. found on 5th haul



111

10347 July 23

7.15 Am to Am.

1/2 full (average) 7.5 m.

1/2 full (average) 7.5 m.

0 5.2.5 205

30 1.1 10.98 @ 15 -

60 1.2 9.7 @ 15 10.5

1/2 m. out 60.0 1 per, per  
min, per

1/2 m. out 50.0 1/2

1/2 m. out 0 "

20 m. out 0 1/2

haddock, 16

5.1 6.2 3.8

3.4 4.7 3.5

4.5 4.1 41 06

4.5 5. 68 51

5.5 3.6

4.4 2.6

4.7 4

372  
371



$$\begin{array}{r}
 182.9 \\
 18.3 \\
 \hline
 201.2
 \end{array}$$

10349

July 24

5:30 AM

110 fath.

S light clear smooth

 $\frac{190}{201}$  meters

0

63.5

W.S.

~~50~~ 30 148 10.54 @ 20 WS~~80~~  $\frac{151}{119}$  7.4 @ 20 WS

130 148 6.98 @ 17 WS

~~180~~ 153 7 @ 21 WS.

Killed swordfish

 $\frac{1}{2}$  Vertical

Rich Col.

20 mt 0

 $\frac{1}{2}$  hr

fair - red, green

 $\frac{1}{2}$  m 0

"

Scanty 1 small

Helgoland 150-0  $\frac{1}{2}$  hr + <sup>Basin</sup> ~~Colours~~ <sup>of fish</sup> eggs

meter 60-0 " lost by cutting

another sword sighted.

# Swordfish

Total length 325  
Tip sword to eye 106  
" " to base dorsal 140  
" " to tip mandible 93  
" " " to maxillary 122  
Base dorsal 30  
Height " 53  
D to finlet 96  
Base finlet b length same 10  
Finlet to base caudal 12  
Spread of caudal 90 | upper 36 | lower 55 |  
Base to fork " 25  
Length caudal ped 28  
Breadth across both do. 34  
Base caudal to finlet 17  
" finlet b length do 8  
" to caudal 26

Anal base — anterior 16

" length 30

" to base posterior 70

Pectoral base 10

" length 43

Sword to opercle 143

Depth

Draw orbit  $\uparrow 9 \rightarrow 8$

" eye  $6\frac{1}{2}$

" pupil  $3\frac{1}{4}$

Interorb 19.5

Diff. D. to tip P. 125

Back & fins slaty black

Ventrals silvery

Iris sea green

Pupil blue black

Snout (black) of skin

Back & caudal 9 rows

long 10



9 Am. Stopped to get trout in  
65 fath. 1 tub. finished  
dinner, 9:30 Am.

Started hauling 10:15 Am

Entire catch

2 squirrel hake

1 silver hake

1 dogfish.

11 Am. bore away

Sta -

40 15

68 05

Set 40 23

68 15

103551 July 24 4.30 PM  
15

Cloudy smooth S. light

1/2 m

Water blue - 2 inches  
greenish

60°

0 W.S.

30 151 12.8 @ 18 W.S.

20 151 4.23 @ 11 (2nd) W.S.

130 145 6.15 @ 18 W.S.

140 153 7.3 @ 19 W.S.

20 net 0

1/2 m net 0

1 P m net 160-0

1/2 m net 160-0

1/2 m net 160-0

1/2 m net 160-0

20 net 0  
+ 20 net 0

40 07

68 57

1035 L July 24

2 PM to 1 PM, 11.30 PM  
Cloudy, smooth sea, 5th light

0		62.5	WS
50	148	4.5 @ 18 (1000)	WS
	149	5 @ 18	WS
100	148	7.8 @ 18	WS
200	152	7.8 @ 18	WS
300	144	5.9 @ 18	WS
400	148	5.5 @ 18	WS
500	153	4.15 @ 18	WS

10.50

1/2 on net - quant. 500-0

30-40-0 mostly, 1000

1/2 on net 0

~~1000-0~~

1000-0

Shrimps, mysidophids & some large  
pyrosoma-like species, which fragments  
filled 2 buckets - one section 10" in diam.

July 23 for 8 days  
weather over. All ready at  
4 AM to set traps but found  
morning up in 55 fath. Sun back  
5.30 AM found large school  
of grampas.

5.45 AM. started to set  
traps in 60 fath. for deer  
+ sheep.

St 10353 July 24 { 6 AM.  
finished set 6 AM.  
Surface temp 14°

2 squenels } Total  
2 white lake. }

low in surface with 1 ft net  
mostly small. Euthymia, a few  
Chironomids & Balanus.

40. 14  
69. 08

72.1  
36.5  

---

17.5

Sta 10057

July 25

11<sup>th</sup> 26  
09 24

Aug. 5. Average 2000

10.45 AM 12 m.

12 feet in 71 meters  
4.4.

0		56.5	WS
30	148	8.92 @ 18	WS
70	152	6.2 @ 18	WS

1/2 m. out 70-0 for 30 days

30 m. out 0 100 m. out

1/2 m. out 0 100 m. out

Water net 60-0 100 m. out

~~Water net~~ 100 m. out

~~Water net~~

Small sand & 100 m. out

1. 2. 3. 4. 5.

5/5 10305 July 25

6 P.M. Rain smooth light,  
7,30 "

20 fath. = 36 in. unseen to 16m  
94 and,

0 33.5 WS.

30 R 148 11.08 @ 15 WS

$\frac{1}{2}$  m net,

Water 16-0 20 min

20 net 0  $\frac{1}{2}$  hr

$\frac{1}{2}$  m net 0  $\frac{1}{2}$  hr 2 Haddock  
Jelly fish  
3 Haddock  
2 puffers

Shed out bottom

Many fish eggs.

3 young haddock taken with  
jelly-fish. In the top fishing  
stations where haddock were taken  
were many of jelly-fish in same  
haul. At this sta the net  
got no jelly-fish, no haddock,  
more than a few eggs.



Sta 142-4 July 6  
12.00 m 2 samples 1.10 AM

1000 m 30 light

18 fath. = 32 m.

0 61° W.S.

50 R. 148 12.2 @ 18 W.S.

Towing slowly

2 m net surface	1/2 hr	Post cal. 20g + fish eggs
20 m net	1 1/2 hr	high and mid range fish
Net set	30-0 m	30 min
" "	10-0 "	20 "

Water firing brightly

$$\begin{array}{r}
 17.29 \\
 100 \\
 \hline
 1.729
 \end{array}$$

10357 July 26

7.25 Am

S.W. Cloudy light smooth

16 fath 29 mats.

0 64

WS.

25 R 148

14.4 @ 18

WS.

Water net 20-0

20 min <sup>swarm</sup> eggs

20 net 0

1/2 in net 0

fish eggs

55 40° 45' 69° 52'

56 40° 57' 70° 18'

57 41° 11' 70° 44'

$$\begin{array}{r}
 16.37 \\
 \underline{2.3} \\
 14.07
 \end{array}$$

10358 July 27.

4.30 AM.

11 fath = 20 m.

0	64.5	WS,
18	144	18.18 @ 18 28

$\frac{1}{2}$  m. 400. 10-0 m.

1 m. 2-0 m.

$\frac{1}{2}$  m. 0

2000 m. 0

10357 July 28

South of Newport R.I.  
11.15 AM

①

W.S.

Water net

30 net 0

1/2 on net 0

Pink fish eggs  
20 min. 1st net  
Rich red  
minico  
Rich fish eggs

Clear in E. fresh smooth

1936 July 28 6.45 PM

A.J. Ed. off ~~from~~ <sup>Sunday</sup> ~~from~~

Class. 2<sup>nd</sup> <sup>Ed.</sup> ~~from~~

65.0 W.S.

Waste net  
1/2 in net  
20 net

10361 July 29

5:30 A.M.

2 miles W from Stratford Shore

15 fathoms - 27 fms

Heavy NE light breeze

68 W.S.

quite hot 20-0 m.

20 net

$\frac{1}{2}$  m net



$$\begin{array}{r} 12 \\ 7 \\ \hline 19 \end{array}$$

10362 Aug 1<sup>st</sup>

40° 22'

73° 38'

W.S. fresh smooth. ~~long~~

fall - meters

9 Aug. 10-30 AM

2.5 m.

0 m.

70

W.S.

22 m. 14% 12.40° @ 19.40 S-

Shed out bottom @ 1/2 h. Rich 4 ft

Water out 10. s " " "

20 m out 0 " scanty.

1/2 m out 0 " "

Seal of bridge 10 m.

1 Silver Lake

6 dark hollow water under

$$\begin{array}{r} 1812 \\ 14 \\ \hline 32.2 \end{array}$$

10363 Aug 1. 3 Pm. 4Pm

Clear, the north calm.

18 - 32 mm. 40° 13'  
73° 20'

Bottom: shells & mud.

0 69 WS.

30 148 8.32 @ 15 hrs.

1/2 m vertical 30-0 fair haul Calanus

Bottom net  $\frac{1}{2}$  hr. 32-0 <sup>Right</sup> <sup>Bottom</sup>

Water out " 20-0 for 10000

7.0 met " 0 ft. 10 in.

$\frac{1}{2}$  m cut " 0 about 100

Clam dredge 10 min. - 1/2 hr.

~~Scalloped daisy~~

Between the 2 last stations found,

of course, without limits, say, 100,000.

Feb. 1906

Sharon and Matt

$$\begin{array}{r} 36 \\ 9 \\ \hline 41 \end{array}$$

10364 Aug 1 7.15 PM  
to 8.20 PM

Clear calm. Smooth

25 fath. - 45 meters

0 71.3 W.S.

40 148 575 @ 15 W.S.

20 net 0  $\frac{1}{2}$  hr. Rpt. since

$\frac{1}{2}$  hr " 0 " Scanty

Net 40-0 " Swam. Dredge  
many 4. f.

Scallop dredge. 10 min

19 large scallops

6 small

$\frac{1}{4}$  bushel sand dollars

1 skate

1 small flounder (kept)



Heavily under all night  
At 4.30 Am Aug 2, while  
heavily drifting, put over  
scall of dredge in Co. 14

Heavily dragged at all, but  
brought up 6 large scallops, 4  
smaller, 2 large & 1 small  
quahog.

Put over quahog dredge 5.30 Am  
Dragged 10 minutes, 1 quahog  
& scallop Many quahog &  
sea-clam shells.



$$\begin{array}{r} 54 \\ \underline{7} \\ 61 \end{array}$$

10365 Aug 2, 6.45 Am.

7.45 Am.

34 fath. = 61 meters.

Clear calm, smooth

0 68.5 WS.

20 149 14.08 @ 22 WS.

40 148 5.28 @ 21 WS

60 153 5.10 @ 20

11 148 5 @ 13 WS

10 min fast

20 net 0  $\frac{1}{2}$  hr. 0

$\frac{1}{2}$  m " 0 " " "

Water net 50-0 " 1 hr. 0

Vertical  $\frac{1}{2}$  m. 60-0 fair column

Reel 1000

2.30 PM

Pentamer - war

10366 Aug. 2 240° Br  
SSE light smooth clear.

30 fath. gm mud & sand 1

91 m,

Set for telegraph 6

0		67		WS
30	149	17.7	@	23 NS
60	145	6.2	@	20 WS
90	153	6.08	@	20 WS.

Trawl, 6 lines

1 squirrel lobster

1 small crab

Water too cold here  
on bottom?

182

26

182

90

164

150

182

110

200

100

218

10367 Aug 2,

8.30 P.M. 9.15 P.M.

S. light partly cloudy smooth.

136 fath. (drifting towards bank

$\bar{T} = 231$  m.

~~Temp~~ 200 m.

0

67.5° W.S.

50 148 8.25 @ 15 W.S.

100 149 14.14 @ 17 W.S.

150 148 10.83 @ 18 W.S.

200 153 8.12 @ 20 W.S.

No net

10268 Aug 2, 10.45 PM  
 Sky E fresh slight chop.

		58.	WS.
100	148	11.42 @ 20	
200	153	8.8 @ 20	WS.
300	149	7.1 @ 20	WS.
400	148	5.50 @ 20	WS
500	153	4.90 @ 18	WS

Water net 450-0 <sup>1 hr</sup> (sandy, fine)  
 20 net @ 1/2 hr (very sandy)  
 1/2 m net @ " fair bank depth  
 exp 3 to 5 ft

10269 Aug 3

Wain clear SE light wobble

5.15 AM Sounded 75 fm.

137 m.

Put over scotch dredge 5.30 AM

Surface temp 65°

Work to, dragging very slowly,  $\frac{1}{2}$  hr.

Bottom blue clay with green  
mud & sand, starfishes & shells &  
a few pebbles

6.30 AM set trawl for tele.

90 m. R 148 8.17 @ 16

Bottom net  $\frac{1}{2}$  hr. But fair

$\frac{1}{2}$  m surface 20 m

Scanty, but fair no of  
telefish eggs



hard	♀	16	Kilo 108 cm
Rise	♀	7 K	81 cm
"		8 1/2	88 cm
"		7 1/2	84
"		7 1/2	85
"		8	86
"		7	80
"		8	77
"		8	83
"		7 1/2	86
"		7	82

No shadows

Poor bait - just fooling  
with it - hooked in left.  
fluffy fish here  
fluffy fish here

$$\begin{array}{r} 109 \\ 9 \\ \hline 211 \end{array}$$

10370. Aug 3

1.45 Pm. - 4.25 Pm.

Clear smooth light. SE

65 fath. = 118 m.

0		71°	W-S.
25	149	9.3 @ 27	WS.
50	148	5.45 @ 27	WS
100	153	9.82 @ 27	WS

20 net 0 15 m. Scanty.

1/2 m net 0 " nothing

Shed net 118-0 1/2 hr. Swam cal

Water net 50-0 20 min " "

Otter trawl.

4 flounders 1 red fish  
 crabs  
 stars  
 Quaking shells

4stot	{	Flounder	35	can	280 g
TT			57		410 g
10747			32		207 g
			29		190 g

got eggs.

Large Hammerheads  
 at end of Sta 1

10371 Aug 3.

Sea light smooth, clear.

6.30 PM - 7 PM

46 fath = 84 m.

Green sand

Surface temp. 72

$\frac{1}{2}$  m net 0 20 m

Otter trawl, 20 m

Polychaetes

1 small

1 small

"

10372 Aug 3 9.45 PM  
10.45 PM

41 fath = 75 m

SW light smooth clay

Scall of dredge 15 min

8 small

33 med to large

1 large mussel

Many shells of shells

A few stars & crabs

Other found 1/2 hr slow

67 5 of them small  $\left. \begin{array}{l} + 5 \\ + 10706 \end{array} \right\}$

4 Potamogon 3<sup>0</sup> 1<sup>3</sup>  $\left. \begin{array}{l} + 10707 \end{array} \right\}$

1 squirrel water TT 10705

20  
6217

10373 Aug 4. 1894  
S.W. Clear sunset light  
36 F = 62 m.

70 443  
60 = 148 7.7 @ 17 11.3

gr mud + sand

1/2 m 0 20 min. very sandy  
20 min 0 20 min. Rich mine  
Cled out 60-0 1/2 min. Col.  
several

Scallop 10 min  
14 large scallop  
1 small  
1/2 bush dead shells +  
sand dollars  
1 silver hake,



3 1/2  
1 1/2

10374 Aug 4 5 AM  
SW by S. light wind clear

26 ft 4 ft deep

Scallop dredge 15 min  
2 bushels sponge &  
Round bottom.

Measurements of  
Herringbone  
Length over all 30.2 cm

Width of head 6.3

" " eye 12.5

Snout to D 8.3

Base D 2.9

Height D 4.3

D to Last T 7.0

Base of D 1.0

Height 2<sup>nd</sup> D 1.1

2<sup>nd</sup> D to Caudal base 2.1

Caudal base to 1<sup>st</sup> vertebra 8.1

" " " base 34.5

" " " fork 21

" " " A 19

" " " 15

" " " 13

A to Nostril 2.9

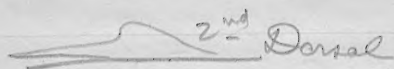
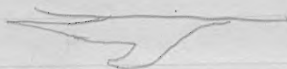
" " 1.7

C.  
tail to notch

17



Shape of Anal



10375 Aug 4  
8 AM 8:45 AM  
Clear. Calm, smooth

23 fath = 41 m.

0 71.5 W 5.  
40 m. 148 6.38 @ 15

Bottom net Bot - 0 1/2 hr. Rich Cor  
1/2 m. surface 20 min. Cult + 4/5  
20 net " 20 min. Scaly

10376 Aug 7, 2-3.0 P.M.

Cape May Harbor.

Surface temp at vessel  $78^{\circ}$

" " " inlet, first  
of the ebb.  $76^{\circ}$  W.S. Surface

Sled net	5-0 m.	20 min. <sup>swarms</sup> stenophores
20 net	0	" very scanty
$\frac{1}{2}$ m net	0	" swarms stenophores.

10377 all bearing from  
cold spring light  
Aug 10. up to 5.30 AM  
Hayy NE. light smooth  
Went to Mearays shoal buoy  
7.20 AM. 5 1/2 to 7 fms.  
7.30 - 7.35. A hrd.  
Star, dead shells, conch  
s by W 4 1/2 miles or so  
sea clam

B. 7.45 - 7.50 Soft.  
2 dead conch shells  
s by W 1/2 W 4 miles

C 8 AM - 8.05 hrd.  
few dead sea clam shells.  
S 3/4 W 1 quohog shell.  
3.3 miles

D. 8.15 - 8.20 hrd. & soft  
s by W 2 1/2 m. blk mud  
many quohog & sea-clam shells